

COMPUTING NEWS

Summer 2006



Summer on campus. A student takes a sunny lunch break on a bench outside the Knight Library.

IN THIS ISSUE...

Telecom Services

Impacts of ONAMI Project on Campus Voice and Data Networks	3
UO Cell Phone Service Changes	19

Email

What Happens to Your Email Account Over the Summer?..	2
Alpha Mail Is Now the Recommended Web Email Interface.....	5
Dealing with Departmental Email Contact Addresses and Staff Changes	21

Microcomputing

Remember: Time to Replace Obsolete Windows Systems ...	2
What Can You Do About Spyware?.....	4
Capturing On-Screen Demos with Camtasia	18

Web

UO Web Programmers: Get Ready for Linux	12
---	----

Sites Worth Seeing.....	23
-------------------------	----

IT Training.....	23
------------------	----

Security

Review of Encryption Tools for Windows PCs.....	6
Don't Be Taken In By High Yield Investment Scams	14
Cybercrime in the News	15
CALEA Update.....	22

UO Libraries Update

UO Media Channel Debuts.....	9
New Library Resources and Services	11

Documents Room

New Web Tools for the Classroom	13
---------------------------------------	----

Statistics

Seven Problematic Areas of Statistical Analysis.....	16
SAS 9.1.3 Service Pack 4 Now Available.....	18

People

Who's Who at the Computing Center.....	10
--	----

Campus IT Support

Departmental Computing Group Meetings	20
Want to Join an IT Task Force?.....	20

Remember: It's Time to Replace Obsolete Windows Systems!

Microsoft has discontinued support and/or critical security updates for systems prior to Windows XP or Windows 2003 Server; the only way to stay secure is to upgrade

If you're using an older version of the Windows operating system (3.11/95/98/98SE/ME/NT Workstation 4.0), you are increasingly vulnerable to malware circulating on the Internet. Systems prior to Windows XP or Windows 2003 Server are no longer supported by Microsoft, which means that you will not have access to critical security updates. Without vendor support to patch bugs and vulnerabilities, you simply cannot safely continue to allow an older system to be connected to the Internet.

You should also be aware that the Fall 2006 Windows Duckware and associated software, which is distributed

free to faculty, staff, and students each year, will not support obsolete versions of Microsoft Windows.

If you're running Microsoft Windows, you should be running Windows XP or Windows 2003 Server at this time. The next generation of Windows, Microsoft Vista, will not be available for business users until November 2006, and the broad base of consumers must wait until January 2007 to buy it.

For more details, see <http://cc.uoregon.edu/cnews/spring2006/obsolete.htm>



UNIVERSITY OF OREGON

COMPUTING CENTER

COMPUTING NEWS

VOL. 21 #3

Computing News is published quarterly by the User Services and Network Applications staff of the Computing Center.

© University of Oregon 2006

Contact: Joyce Winslow
jwins@uoregon.edu

Photography: Dave Ragsdale
dave@uoregon.edu

Joe St Sauver, Ph.D.
Director, User Services
and Network Applications
joe@uoregon.edu

Website:
<http://cc.uoregon.edu/cnews/>

Telephone: (541) 346-1724

What Happens to Your Email Account Over the Summer?

Can you still use your UO account when you take a term off or graduate?

Students frequently want to know how long their UO email accounts will remain active after they graduate or leave school for awhile.

If you're taking a term off: All students who take a term off and then register for classes *the following term* can continue to use their computing accounts without interruption. However, if you take more than one consecutive term off before reregistering, you should expect your account to be disabled during the second consecutive term that you aren't registered (after the cutoff date for late registration).

This policy also applies to students who are on leave or who are involved in a program that causes them to not show current term credits for more than one term.

If you graduate: If you graduate, your account will remain active for the term following your graduation.

If you have further questions about your UO email account, call Microcomputer Services at **346-4412** or visit the Help Desk in 151 McKenzie Hall weekdays from 9 a.m. to 5 p.m.



Got Extras?

If your campus department receives surplus copies of *Computing News*, you may return them to the UO Computing Center for redistribution.

What to Expect: Impacts of the ONAMI Project on Campus Voice and Data Networks

Most campus users will be minimally affected, but construction activity will definitely be noticeable!

Dave Barta

Director, Telecommunications Services
dbarta@uoregon.edu

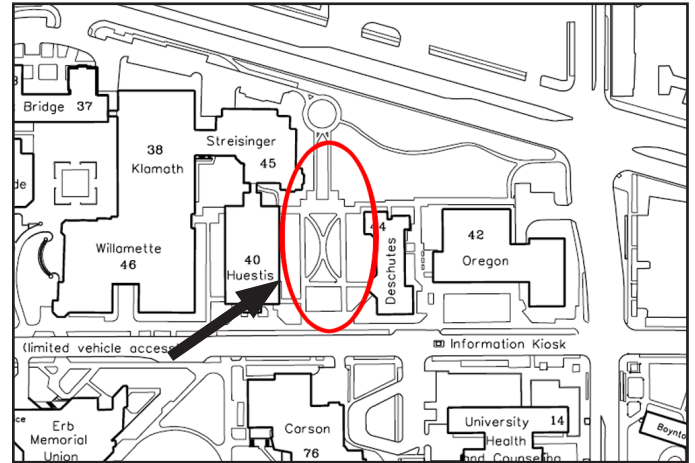
The siting of the Oregon Nanoscience and Microtechnologies Institute (ONAMI) project on top of a major underground duct bank carrying copper and fiberoptic cables from Oregon Hall to the rest of campus has created a fast-tracked and compressed project for Telecommunications Services and Network Services. The impact should be minimal or positive for most campus users, but it *will* be visible.

The conduit and cables running through the ONAMI footprint must be replaced or relocated before full-scale construction of the new underground facility can begin in late August. In order to make that happen our Telecommunications and Network Services crews must:

- place next-generation technology components of the campus PBX telephone system into remote locations in five buildings, replacing the equivalent components in the basement of Oregon Hall
- prepare those buildings and rooms for the new equipment, including improved cooling and power to these rooms and new cable connections to the buildings which will be served from those locations
- replace all of the oldest digital telephones (model 7434) on the campus with newer ones
- place high speed single-mode fiberoptic cable connections to some buildings
- replace traditional telephones in an additional off-campus location with IP phones that run exclusively on the data network and reconfigure the network to reliably and securely support them
- place a new manhole and excavate and install conduit in 13th Street by the parking kiosk, connecting the steam tunnel to an existing underground utility vault across from the Carson loading dock
- install new copper and fiberoptic cables in those ducts to connect Oregon Hall to portions of the existing cables that will be cut
- splice the new cables into the old ones

For the most part, the impact of this work on users of the campus telephone and data networks will be minimal. Nonetheless, some disruption is unavoidable, and you may be affected by one or more of the following activities:

1. The replacement of model 7434 telephones (currently underway). As there are a couple of choices of new telephones and they have different button configurations, we are working with



Map of the area immediately impacted by the ONAMI construction project. The circled area is scheduled for excavation this summer, requiring extensive revision of conduit and cable routes.

individual users on this.

2. Construction on 13th St. to excavate the stretch from the tunnel to the vault. Vehicle traffic in this area will have to be rerouted.
3. Construction activity and increased traffic to telephone rooms in the Knight Library, Clinical Services Building, Lillis Business Center, Baker Downtown Center, and Living Learning Center in particular, but also to the Building Entrance Terminals (typically in the basement) of virtually every building in the older section of the campus.
4. Cutover of telephones from the old cables to the new modules. This will be invisible, but there are so many telephones that will be affected (roughly 3,500) that there will undoubtedly be trouble reports. We will be working with telephone coordinators in the affected buildings so they'll know when a disconnected telephone might be the result of the project.
5. Cutover of data networks in campus buildings from existing fiber optic cables to new ones. As with telephone cutovers, this will be largely invisible, but some troubleshooting may be necessary to keep systems running smoothly.

This is a project that would normally be planned and scheduled over the course of a year or more, but in order to facilitate the construction of ONAMI it is very much compressed and is consuming most of the focus of Telecom Services as well as significant resources from Network Services. We appreciate the forbearance of our users with any inconveniences that result. In the long run it not only enables the ONAMI construction but also moves the campus telephone system a step into the next generation of campus voice services.

What Can You Do About Spyware?



Some tips for Windows users who are fighting the good fight against spyware contamination

Dan Albrich

Manager, Microcomputer Services
dalbrich@uoregon.edu

Spyware continues to be a major problem for Microsoft Windows users around the world.

While our site-licensed antivirus software (McAfee VirusScan) includes an antispyware module, we recommend using multiple products to combat the numerous current and emerging spyware threats. Our help desk here at Microcomputer Services commonly uses and recommends several free antispyware packages:

Ad-Aware. Lavasoft's Ad-Aware tends to be one of the best overall antispyware packages and one of the oldest packages on the market. Since it is free for non-commercial use, it makes Ad-Aware an attractive option. Unfortunately, a serious vulnerability was recently discovered in Ad-Aware software. This vulnerability had to do with the format Ad-Aware uses to store its definition files, a format which was too easy to guess (and exploit). The vendor has now released a patch that verifies the authenticity of Ad-Aware definitions. Note that Lavasoft claims they will include this patch with future versions of the product. See our download links from <http://micro.uoregon.edu/security/windows/> for both the software and the necessary patch.

Spybot. Spybot Search & Destroy is another favorite antispyware tool. This one is also free to use, and the author was kind enough to allow us to distribute this software on our UO Security CD. The author seems to support this software himself, without a programming team to update this software. The package is very good,

especially considering that it's made freely available. The author accepts donations on the download page.

Microsoft Defender. Microsoft Defender (formerly Microsoft AntiSpyware) is actually a good commercial package acquired from "Giant AntiSpyware." You may download Defender at no charge from <http://www.microsoft.com/athome/security/spyware/software/>. One nice feature of Defender is that it's regularly updated via Windows Update.

Which Antispyware Program(s) Should You Run?

The lesson learned from the antivirus world is not to install more than one antivirus package at a time—but unlike antivirus tools, antispyware tools are unlikely to conflict with each other.

With this in mind, we freely recommend you install and use more than one antispyware package for best security. For practicality's sake, if you choose only one we'd recommend the Ad-Aware package, as it seems to be better overall at detecting and eliminating spyware threats. We have arrived at this opinion from our direct experience at the help desk.

Unfortunately, none of these tools catch *every* piece of spyware, so if you have the patience to install, run, and maintain all three packages, then we recommend doing so. Using multiple packages will provide more protection.

For more information about securing your Windows PC and for download links to the three packages described in this article please see <http://micro.uoregon.edu/security/windows/>

Questions, Comments, Concerns?

Feel free to contact the Microcomputer Services group if you have further questions about PC security measures. Our help desk is located in 151 McKenzie Hall, and we are open 9 A.M. to 5 P.M. Monday through Friday. You can also send us email at microhelp@lists.uoregon.edu, or call (541)346-4412.

Microsoft CEO Gets a Taste of PC Debugging Woes

In a recent report by Joel Shore ("Even the Builders of Windows Find Tech Support a Challenge," *ITWorld.com*, 5/25/2006), he recounts an anecdote about Microsoft CEO Steve Ballmer's eye-opening experience with real-world Windows problems. While a guest at a friend's child's wedding, Ballmer was asked by the host to help him troubleshoot some problems he was having with his computer. What began as a response to a simple request turned into a 48-hour nightmare marathon of trying to rid the afflicted PC of more than 100 pieces of malware of all types. Ultimately, "it took a team of engineers to restore this system to health," Shore writes. "And it was a real wake-up call." To read the full story, go to http://www.itworld.com/Man/2676/nls_solutinons_vista060525/

Alpha Mail (“Blue” Webmail) Is Now the Recommended UO Web Email Interface

Joe St Sauver, Ph.D.

Director, User Services and Network Applications

joe@uoregon.edu

The University of Oregon is currently on its third generation of web email interfaces.

Some old-timers may remember our first web email interface, Infinite Technology’s black, “spidery” commercial webmail interface, which was removed in March 2005 after vendor support for that product ceased.

Our second-generation web email interface, introduced in 2000, was IMHO webmail, often referred to locally as “green” web email because of its color scheme. For five years IMHO ran alongside black web email, but unfortunately IMHO is no longer broadly-supported and recently it has become increasingly problematic in a variety of ways (including incompatibility with some web browsers such as Mac OS X’s Safari).

That brings us to our third-generation web email interface: locally written, open source Alpha Mail, also known as “blue” web email. Alpha Mail was introduced in September 2005 as a new experimental interface, and has been universally well received by users. (You can see some of its special features at <http://cc.uoregon.edu/cnews/winter2006/alphamail.htm>)

Effective this summer, with Alpha Mail’s 1.0 production release, we’re happy to announce that Alpha Mail is now our recommended production web email interface for all UO web email users.

This change will be reflected in the presentation of web email choices on <http://email.uoregon.edu/> beginning in summer term. IMHO (green web email) will continue to be available for existing loyal IMHO users, albeit in deprecated status, but all new and existing users should begin using Alpha Mail instead.

In particular, IMHO (green web email) users should understand that IMHO is old, and because it is poorly supported at this point, it’s possible that security considerations may eventually arise that require us to abruptly restrict or discontinue access to it. Patches or workarounds for IMHO bugs, such as Safari-related issues, should not be expected.

Therefore, we encourage all web email users to move to Alpha Mail (blue web email) at their earliest convenience.

Web Email Q&A

Q. I use Thunderbird (or Outlook, Eudora, or some other IMAP or POP email program) on my PC, or Pine at the percent-sign shell prompt. Does this change affect me?

A. No. This change applies only to UO web email users.

Q. I use Hotmail (or Yahoo Mail, Gmail, or some other third-party web email service). Does this change affect me?

A. No, this doesn’t impact third-party web email accounts.

Q. But I *like* green web email and want to continue using it!

A. For now, you may. However, you should recognize that it may become necessary for us to discontinue access to the green web email interface with little or no advance warning at some point in the future if security problems require us to do so. We’d urge you to give Alpha Mail a try. We think you’ll really like it.

Q. Does this change affect my email address, or will I lose any mail if I move from green web email to blue web email?

A. No. Your uoregon.edu email address stays the same, and all your email will continue to be available.

Q. I’d like to know more about Alpha Mail. Is there formal documentation for it?

A. Yes. While Alpha Mail is designed to be self-explanatory, we have a handout available online at <http://cc.uoregon.edu/acrobatdocs/alphamail.pdf>

Q. I’d like to get a copy of Alpha Mail for installation on some other system.

A. Please see <http://alphamail.uoosl.org/>

xterminal bootp service phaseout

If you’re one of the handful of users on campus still using an old X terminal that loads its software via bootp from Darkwing, please be aware that when the classic Darkwing is decommissioned this summer that service will no longer be available. Because traditional X terminals do not support essential encryption (such as ssh), we recommend that they be replaced by a more conventional workstation such as a Mac, PC, or Linux-based system.

Taking Charge of Your Own Data Security: a Review



Securing sensitive data is an important part of a multi-layered security plan

John Kemp

Senior Security Engineer
Network Services
kemp@ns.uoregon.edu

In recent months a number of high-profile data security breaches have made headlines. Most recently, in May 2006, the U.S. Veterans Administration reported the theft of a laptop containing the records of more than 26 million veterans, and Texas Guaranteed Student Loan Corporation lost equipment containing names and Social Security numbers of 1.3 million borrowers. In May 2005, a credit card account processing company known as CardSystems Solutions revealed that up to 40 million credit card numbers had been exposed in a network security breach. And in January 2005, George Mason University disclosed that a campus ID card server had been compromised by a network break-in, possibly affecting as many as 32,000 people. Such incidents have created an increased level of awareness of the importance of data security.

What can you do to protect yourself? If you have sensitive information stored on your personal computer, you should consider using file encryption. File encryption is a tool that can be used to protect critical data assets. If a desktop or a laptop is stolen but the critical data on the machine has been secured with authentication and encryption, it's less likely that the data will be exposed. Similarly, if a computer is connected to the Internet and a network break-in occurs, encrypted data is less likely to become a source of more serious problems. Below is a description of some of the more popular tools that can be used to perform file and folder encryption on Windows systems.

File Encryption Utilities

1. Axantum AxCrypt

<http://axcrypt.axantum.com/>

AxCrypt is a free file encryption utility for Windows that integrates very well with the Windows environment. Upon installation, the utility adds an AxCrypt option to the Windows file dialog that allows you to encrypt or decrypt files. Encrypted files are saved with a .axx extension and are stored using an AES encryption format. The authentication used for the encryption can be either a password, which can be up to 22 characters in length, or a randomly generated key file.

AxCrypt has some features that make it very easy to use. When a file is decrypted, the program will automatically launch the correct application for the associated file type. When the associated application is closed, the utility will automatically re-encrypt the edited file. This makes the utility very convenient to use because you don't have to remember to encrypt the file after you're done editing. The program can also be configured to cache the password key in memory, so that you don't have to type the key repeatedly when opening and closing the file for repeated edits. These features can be enabled or disabled in the file dialog menu. When a directory is selected, the program performs encryption or decryption on all of the files within the directory. The program also includes support for self-extracting .exe files.

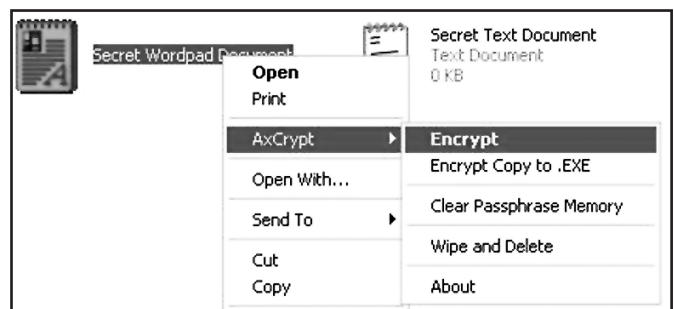


Fig. 1: The AxCrypt dialog box.

2. CP Lab's File Encryption XP

<http://www.cp-lab.com/filecrypt/>

CP Lab offers some fairly easy-to-use encryption products. One of these is "File Encryption XP," a straightforward program that allows you to encrypt and decrypt files or folders. The program adds "Encrypt," "Decrypt," and "Wipe" options to the Windows file selection menu. The program uses the Blowfish algorithm for encryption, and encrypted files are identified by a .fex extension. You may also create standalone self-extracting files that are password-protected by using this program.

It should be noted that the operation of CP Lab File Encryption XP is as simple as it can be. When a file is encrypted, it creates the .fex file, and when a file is decrypted it replaces the original source file. Users are required to remember to re-encrypt the source file when they are finished editing. The program costs between \$10 and \$25, depending on the number of licenses purchased.

3. PKWare PKZip9 for Windows

<http://www.pkware.com/>

PKWare offers a number of products built around its popular zip file compression format. PKZip9 includes advanced encryption features that add to the capabilities of the software. The program adds a PKZip option

of Encryption Tools for the Windows PC

to the Windows file dialog. In the Security section of the PKZip options, you can select either an older or newer style of encryption. The older historical PKZip password-based encryption type is chosen by selecting "Traditional: Password." Newer types of encryption are chosen by selecting "Strong: Password," which enables the use of the AES or 3DES encryption options. PKZip also supports the use of certificates for authentication and for digital signatures.

As you might expect, PKZip has the look and feel of a compression utility. File operations take the form of "adding to an archive" or "extracting from an archive." For those users who are working with large files and frequently require compression as part of their work process, it can be useful to have both encryption and compression available within the same program.

PKWare has a number of products that build upon the foundation provided by its original compression product. A PKZip command-line tool extension can be purchased which can be used to automate batch processing. A SecureZip version of the PKZip program provides additional email support features, such as the ability to specify multiple recipients when using certificates with email. The PKZip program itself costs between \$9 and \$29, depending on the number of licenses purchased.

4. GNU Privacy Guard

<http://www.gnupg.org/>

<http://www.gpg4win.org/>

GnuPG is a free implementation of the OpenPGP standard. PGP is a fully distributed public-key system that can be used for document signatures and file encryption. The keys used by PGP are created by each individual user. A private/secret key is maintained by the user and kept in a secure location. The private key is also protected by a user-selected password. The other half of the user-generated key pair is a public key that is sent to a public keyserver. All users can access the public keyserver to allow for encrypting a document targeted for a particular user, or to verify the digital signature of a document sent by a particular user. PGP is often associated with email security. The Enigmail plugin for Mozilla Thunderbird, for example, is a popular tool for adding PGP support to email.

GnuPG is free, and you may download a pre-compiled Windows version of the software directly from the gpg4win.org website. This version includes the primary GPG application, as well as utilities such as the Gnu Privacy Assistant. The GPA utility gives you a Windows utility for performing key management, and it includes a File Manager utility which can be used to perform encryption and signing operations on files. The Gpg4Win package is similar to this basic package, but also includes the GPGee plugin for Microsoft Explorer file encryp-

tion and the GPGol plugin for Microsoft Outlook email encryption.

Windows Encrypting File System

The Windows Encrypting File System (EFS) is also a public-key system. In this case, the tools for generating and managing the keys are already included within the Microsoft operating system. Key management tends to be handled in a more tightly controlled manner when an organization is using EFS as opposed to PGP. Key storage can be integrated into an Active Directory domain or be included as part of a larger Public Key Infrastructure system. Recovery Agents can be designated to support the recovery of encrypted data under special circumstances. As you might expect, the management of this kind of public key infrastructure can be complex.

Once it is up and running, the operation of EFS is largely transparent. The user's private certificate is accessed and cached by the operating system upon login. From that point on, file access requires no special actions. You enable encryption simply by setting the attributes for the File or Folder within Windows Explorer.

Please note that the Windows NTFS filesystem is the only filesystem type that supports EFS. Also be aware that the use of NTFS file system attributes can create additional challenges when a full system recovery is required.

Other Encryption Tools

This article has focused primarily on file encryption. Encryption can be applied at many different stages within a data management life cycle. For example, there are products that perform encryption at the application level, at the filesystem level, at the partition level, or at the disk level. Some of the products are software only, and some include hardware components. Some of the products use simple passwords, while others include smart cards, USB tokens, or biometric readers that use fingerprints as the key for decoding the encrypted data.

One example of a simple hardware disk encryption interface that is being bundled with external drive enclosures is the Enova X-Wall IDE interface. Enova manufactures IDE interface boards that can supply DES or 3DES encryption to transform the stream of data as it travels to and from the hard disk. Tokens are included with the drive that are keyed to match the specific interface. The tokens are plugged into external connectors wired to the interface. When the token is removed, the drive is inaccessible. The CoolDrives SecureDisk enclosure and the Macally PHR-250CE enclosure are examples of products that use this type of technology.

There are also a number of products that are software-based which can be used to create encrypted virtual filesystems. Once the new filesystem is created and mounted, the encryption operations are transparent to

Encryption Tools for Windows, continued...

the user. During the process of mounting the filesystem, a password or other token is requested. The open-source product TrueCrypt is one example of this kind of utility. Jetico's Bestcrypt and Cypherix's Cryptainer are examples of commercial products of this kind.

At the other end of the spectrum there are small, self-contained applications which can be used to provide secure data storage. Password manager software and electronic wallet software are examples of these kinds of applications. People typically use such applications to store things like passwords or credit card numbers in an easy-to-use, secure location. KeePass Password Safe is an example of a freely available password storage application (see Fig. 2 below). It is available for Windows, PocketPC, and various flavors of Unix. Another open source password storage utility is Password Safe, which you may download from <http://passwordsafe.sourceforge.net/>. Illium Software's eWallet is an example of a commercial password storage utility for PocketPC and Windows.

Summary

The type of data security approach you use will depend on a number of factors. In some cases, the approach will

be determined by the type of data you are dealing with. In other cases, it will simply be a matter of personal preference. In either case, there are plenty of applications to choose from, and you should be able to find one that fits your requirements.

When you are working with sensitive data, be aware of the risk level associated with that data. If possible, this kind of data should be kept off of a computer. If that is not possible, then you should probably be storing the data in an encrypted format. Additional measures you can take are to try to keep the computer disconnected from the Internet. Often you will find that sensitive data is kept on isolated computer networks, or on computers that are behind a firewall.

As always, data security should be one layer of security in an overall multi-layered security plan. This is known as "defense in depth." It is assumed that you are already taking normal security precautions by performing patches, running antivirus software, running antispyware, and utilizing some type of firewall software. File encryption is the additional layer of security that can protect you when all of the other layers have failed.

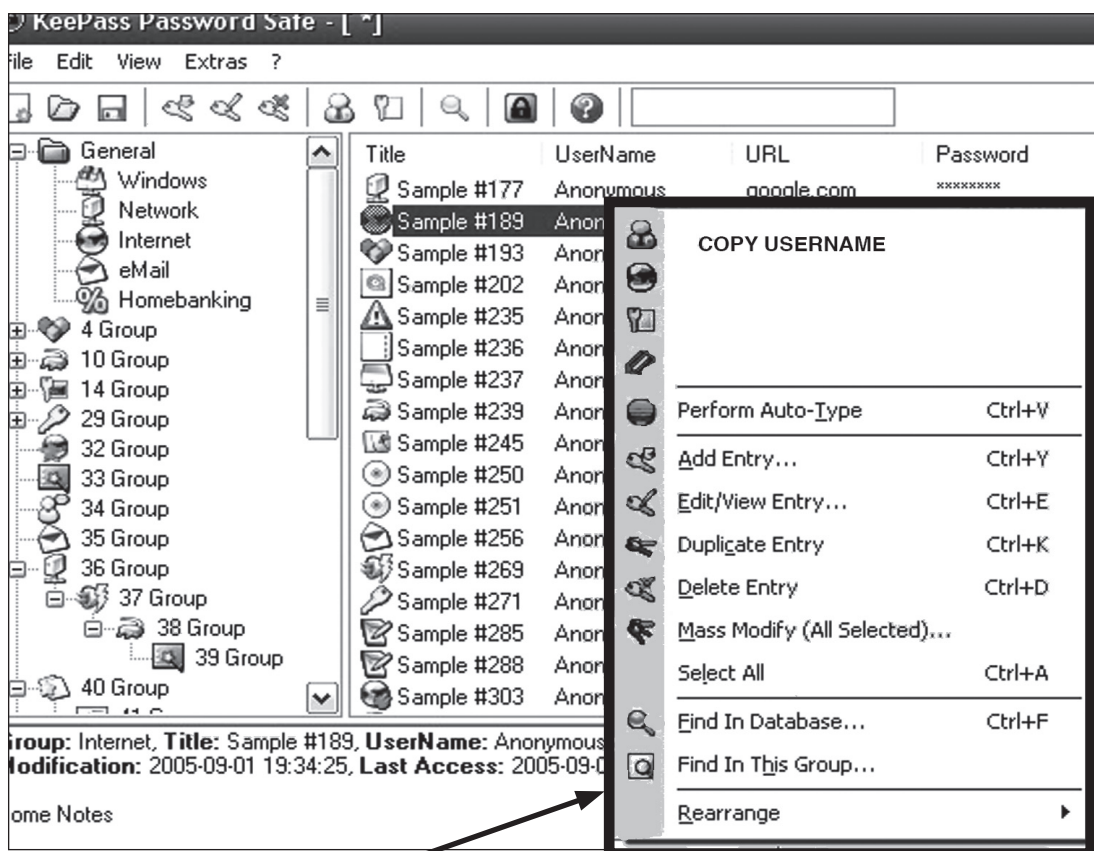


Fig. 2: KeePass Password Safe menu options.

UO Media Channel Debuts

The UO's new streaming video and audio channel offers a rich variety of programming

Ron Renschler

*Director, Library Communications
UO Libraries
ronr@uoregon.edu*

What do UO President Dave Frohnmayer, filmmaker David Lynch, and Kenyan novelist and human rights activist Ngugi wa Thiong'o have in common?

They're all part of UO Channel (<http://media.uoregon.edu/>), a newly launched service offering streamed video and audio programs that reflect the quality, creativity, and diversity of academic and cultural life at the University of Oregon.

A link to UO Channel is available at the end of the Highlights section of the UO homepage (<http://www.uoregon.edu/>), or it can be accessed and bookmarked directly at (<http://media.uoregon.edu/>). The UO Channel allows anyone with an Internet connection and free media player software to view dozens of UO lectures, interviews, and performances on their computers whenever and wherever they want. Podcasts and audio-only streaming are also available.

President Frohnmayer himself initiated the development of the new service to give wider exposure to the university's public programming, much of which is generated through public lectures and artistic performances. Many of these programs are videotaped and converted to digital files by the UO Libraries' Media Services. The files are then posted to the UO Channel, where video streaming technology allows them to be viewed anytime, anywhere.

"The UO regularly hosts some of the world's foremost thinkers and speakers on issues of national and international significance," Frohnmayer says. "The UO Channel takes advantage of current technologies to make these presentations available to a global audience while showcasing an important part of academic life at the University of Oregon."

In addition to lectures by David Lynch and Ngugi wa Thiong'o, the UO Channel offers streamed video presentations by many well-known authors, scholars, and public figures such as feminist writer bell hooks; former South Korean prime minister Lee Hong-Koo;

The screenshot shows the UO Channel website. At the top is a dark banner with the University of Oregon logo and name. Below this is a navigation bar with links: Home, UO Channel, Support and Downloads, and Podcast. The main content area is divided into two columns. The left column contains a sidebar with links: Mission, UO Community, Off Campus Users, Scholars' Bank, University Calendar, and Campus Radio. The right column contains a 'Featured Channel Content' section with four items, each featuring a small video thumbnail and a text description. The first item is 'Browse our complete archives', the second is 'Lee Ann Daly - "Fueling Opportunity"', the third is 'The Emerging Asia Pacific Community and the American Role', and the fourth is 'Know Your Pacific Northwest Colleges: University of Oregon'.

Pulitzer Prize-winning critic and author Louis Menand; two noted experts on terrorism, Loretta Napoleoni and Robert Pape; and author and activist Wilma Mankiller, who currently occupies the Wayne Morse Chair of Law and Politics at the UO.

Other video programs center on cultural and academic life on campus, including a performance by the UO's Students of the Indian Subcontinent, interviews with student winners of the Undergraduate Library Research Awards, and President Frohnmayer's recent State of the University address.

Fresh content will be continually added to the UO Channel as new programs become available. All programming will be archived for on-demand viewing and will also become part of Scholars' Bank, an institutional repository for UO research, publications, and supporting materials in digital form (see <https://scholarsbank.uoregon.edu/dspace/>).

The UO Channel was made possible through the cooperative efforts of the UO Libraries, the Computing Center, and the Office of Public and Media Relations. Streaming Media Services, part of the library's Media Services, took the lead in designing and implementing the UO Channel.

For more information, contact Andrew Bonamici, associate university librarian for instructional services at (541) 346-1459, bonamici@uoregon.edu. Members of the university community who would like to propose or submit video content for the UO Channel can submit their suggestions using an online form at the UO Channel website.

Who's Who at the Computing Center

Meet our new executive assistant...

Joyce Winslow
jwins@uoregon.edu



Beth Sprague, Assistant to the Vice Provost/CIO

It's a good thing Beth Sprague trains for marathons. For the past several months, she's been running back and forth between Johnson Hall and the Computing Center, juggling dual roles as executive assistant to outgoing Sr. Vice President and Provost John Moseley, and as assistant to the UO's new Vice Provost of Information Services and CIO, Don Harris.

Beth's transitional department-hopping officially ended June 1, when she settled into her new position as our CIO's full-time assistant. Her five years as Moseley's right

hand have helped make the transition to her new job a relatively smooth one, as she is not only very familiar with UO administrative systems, but she's also already well known to many UO staff and faculty.

Beth has lived in western Oregon since the age of three, and growing up in the country around Pleasant Hill has engendered an enduring love of green landscapes and a passion for outdoor activities. Her home in Oakridge, which she shares with her husband Dusty and dog Tango (her "number-two favorite guy, after Dusty") adjoins the Willamette National Forest, affording the Spragues many opportunities for impromptu hikes and fishing expeditions right outside their back door.

As for running marathons, you might say Beth, with her Greek heritage, comes by it naturally. In the past, Beth has participated in the annual Hood-to-Coast Relay and the Crater Lake Rim Runs and Pacific Crest triathlons, and she is currently training for this summer's Pacific Crest Half Iron triathlon in Bend—with her unofficial trainer Tango nipping at her heels when she begins to lag. In addition, she and two of her equally outdoorsy brothers are planning to speed-hike the rugged Wallowa Mountains in July.

Another of Beth's outdoor passions is gardening. At home, she tends a 40' x 50' vegetable patch whose bounty she shares with coworkers and friends throughout the growing season. Her green thumb is so well appreciated that in years past she has even struck a convenient arrangement with an Oakridge cafe, exchanging a regular delivery of veggies for an endless supply of her daily morning coffee.

This summer Beth and Dusty will celebrate their thirteenth wedding anniversary. If Beth's dream comes true, perhaps they'll celebrate a future anniversary in Athens, with Beth competing in the annual Greek Marathon and connecting with long-lost relatives.

Web Development Design Tips...

If you're interested in learning more about making your website user-friendly, you may want to check out the free e-newsletter *UIEtips*.

This informative publication features regular columns by experts in the field of real-world usability testing research. Some of their test results may surprise you. The current issue features an enlightening interview with content-management expert Gerry McGovern on "The Importance of a Customer-Centric Design Approach..." (http://www.uie.com/articles/importance_of_customer/) You can sign up to receive *UIEtips* at <http://www.uie.com/uietips/>

UO Library Offers New Resources, Services

Ron Renschler

Director, Library Communications
UO Libraries
ronr@uoregon.edu

The UO Libraries continually acquire new resources and launch new services that benefit the entire campus community. Here are a few recently added services and electronic resources available to faculty, students, and staff:

Electronic Resources Librarian On Board

David Fowler recently joined the UO Libraries faculty as electronic resources librarian. He will manage the licensing, acquisition, activation, set-up, and renewal of a wide range of electronic resources, including databases, electronic journals and books, and reference sources. If you have questions or comments about the library's electronic resources, contact Fowler at **346-1839**, dcfowler@uoregon.edu.

IM Reference Service

A new instant messaging (IM) reference service is now being offered by the University of Oregon Libraries. UO students, faculty, and staff can now use IM to get their questions answered by reference staff at Knight Library and the Science Library.

IM is a means of using either software or a web page to exchange typed conversations in real time with another person. You'll find complete information on procedures and screen names for contacting a reference desk staff member via IM at <http://libweb.uoregon.edu/general/im.html>

IM service is typically offered at the Knight Library reference desk whenever a staff member is present. For staffing hours, see <http://libweb.uoregon.edu/reference/refhours.html>

In-person, email, and telephone reference services will continue to be offered at all campus libraries: Knight, Science, AAA, Law, and

Math. For more information on IM and other reference services, contact Paul Frantz (pfrantz@uoregon.edu, **346-1880**).

Oxford Digital Reference Shelf Adds Titles

The Oxford Digital Reference Shelf, published electronically by Oxford University Press, adds 17 new electronic titles formerly available only in print to the 150 electronic titles already available as part of the library's Oxford Reference Premium Collection. The new titles include Oxford dictionaries and encyclopedias on several historical periods and literary genres, as well as on economic history, evolution, global change, dance, linguistics, food and drink in America, Latinos and Latinas in the United States, and theater and performance.

All titles in these collections are searchable individually or as a group. To access all currently available Oxford titles, go to <http://libweb.uoregon.edu/> and select Oxford Reference Premium Collection from the alphabetical drop-down menu in the Databases and Index area.

Is There an ECCO in Here?

Yes, there is. (Yes, there is. Yes there is.) The UO Libraries has added Eighteenth Century Collections Online (ECCO) to its holdings. ECCO is a major electronic research tool for scholars in many different disciplines. It offers online delivery of digitized facsimile versions of almost every English-language and foreign-language title printed in Great Britain during the eighteenth century, along with thousands of important works from the Americas.

With digital renderings of more than 150,000 printed works across all fields of eighteenth-century endeavor—from literature and the arts to the natural and physical sciences—ECCO represents one of the most ambitious digitization projects

ever undertaken. Included are works from women writers of the eighteenth century, collections on the French Revolution, and numerous editions of Shakespeare's works. Multiple editions of individual works are offered to enable scholars to make close textual comparisons.

The full text of all material included in ECCO is searchable, giving scholars the ability to find every appearance of an individual word or phrase in virtually all materials printed in English in the eighteenth century. Items included in ECCO can also be searched by keyword, title, and author.

To view material included in ECCO, select Eighteenth Century Collections Online from the alphabetical drop-down menu in the Databases and Index area on the library's homepage (<http://libweb.uoregon.edu/>).

ECCO complements the library's earlier acquisition of Early English Books Online (EEBO), which contains digital facsimile page images of virtually every work printed in England, Ireland, Scotland, Wales, and British North America and works in English printed elsewhere from 1473 to 1700. EEBO can be accessed by selecting it from the alphabetical database menu on the library's homepage.

ECCO was acquired through a generous gift from Margaret and Thomas Hart, with additional collaborative funding from the UO College of Arts and Sciences, UO Office of Research and Graduate Studies, and UO Libraries.

Coming Events

Several new and improved services are on tap at the library this fall:

- Blackboard upgrade (from version 7 to version 7.1)
- new library website design
- the opening of a technology-rich Learning Commons in Knight Library

Look for more details on these developments in the Fall 2006 issue of *Computing News*.

UO Web Programmers: Get Ready for Linux

The advent of new Linux web servers means some of your web pages may need to be modified

Joe St Sauver, Ph.D.
*Director, User Services and
Network Applications*
joe@uoregon.edu

As part of phasing out “classic Darkwing,” www.uoregon.edu web pages will soon be served from new Linux web servers. This means it will be important for UO web programmers to check and confirm that their cgi programs will run correctly from the new server environment.

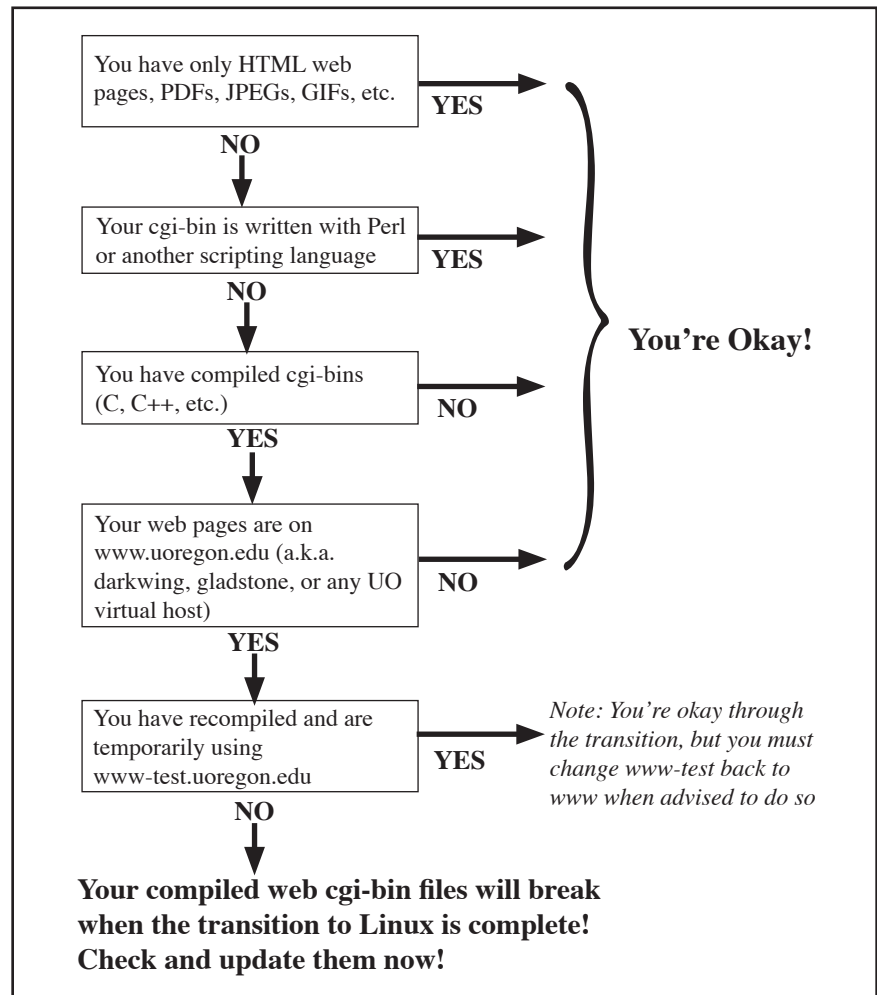
If you have *only* regular web pages (HTML documents, JPGs and GIFs, PDF files, etc.), your pages won’t need to be modified to work on the new web servers. Once the conversion occurs, your pages will simply be transparently served from the new, faster hardware (the new servers will automatically see your web pages just as the old ones did).

Similarly, if you have cgi-bins coded in Perl or another scripting language that is interpreted rather than compiled into an executable, in most cases those programs should also continue to work without issue on the new systems.

Who is affected: UO web programmers who *will* need to modify their programs are the rare UO folks who have written code in C (or C++, or any other compiled programming language) for use via the web. Those compiled executables will have been built for a SPARC Solaris environment, but the UO’s new web servers will soon be using a Linux environment instead.

Six Things UO Web Programmers Need to Know:

1. The classic Darkwing SPARC/Solaris web servers will go offline when the rest of classic Darkwing is turned off on August 15. You’ll



want to test and tweak your cgi-bin servers prior to that time.

2. The change in web server architecture will potentially affect cgi-bins with URLs that include any of the following hostnames:

- www.uoregon.edu
- darkwing.uoregon.edu or gladstone.uoregon.edu
- any www.uoregon.edu-based virtual host. See the list at <http://www.uoregon.edu/virtual-www>

Darkwing and Gladstone are legacy references that are now deprecated. Those URLs should now refer to www.uoregon.edu (see http://cc.uoregon.edu/cnews/winter2006/dw_names.htm)

3. To facilitate testing your cgi-bins, you can use the temporary URL www-test.uoregon.edu instead of www.uoregon.edu

When you recompile your cgi-bins you don’t need to move any files to begin having them served from that test URL. Both www-test.uoregon.edu and www.uoregon.edu addresses see the file system the same way, and both can currently serve your web pages. When you change URLs or cgi-bins to use www-test.uoregon.edu, those web pages or cgi-bins will immediately run from the new web server environment, and if they work when run from that test environment they should be fine on the new production web servers.

If you use www-test.uoregon.edu for testing, please note that you will eventually need to change any www-test.uoregon.edu references back to normal www.uoregon.edu references once we’ve completed the migration to the new servers.

4. UO users can do compiling, debugging and other program development tasks for the new web servers on shell.uoregon.edu (see <http://cc.uoregon.edu/cnews/spring2006/shell.htm>).

One complication you should be aware of is that the shell server, like most systems that are part of the new system architecture, is a 64-bit Opteron-based server. However, the new web servers (www-test.uoregon.edu and the other servers that will actually run your cgi-bins in production) are 32 bit x86 servers. This difference will normally not matter unless you're compiling code to run as cgi-bins. If you are compiling code, it will be important for you to use

```
gcc -m32 -march=i686
```

when compiling with gcc (other compilers will need similar flags to generate 32 bit code for an i686 target environment). Code compiled with these flags should run fine on both shell.uoregon.edu and the new web servers.

5. Web server logs are available on shell.uoregon.edu in /var/log/apache in 'combined' log format. Because syslog is being used to populate those logs, each line is prefixed with a date and time stamp, the name of the server generating the record, and so on. If you analyze server logs, you'll want to edit out that information to get to standard Apache log format using a command such as:

```
sed 's/^.* logger: //' \
</var/log/apache/access_log
```

6. What if you're using a departmental web server, a personal web server, or a commercially hosted web server?

This change will not affect any of those web pages.

Questions, Concerns?

Please feel free to email me at joe@uoregon.edu, or contact Unix Consulting at consult@uoregon.edu or (541) 346-1758.

New Web Tools for the Classroom

Vickie Nelson

Documents Room Librarian

vmn@uoregon.edu

New web tools have made it easy for people who were once simply consumers of web content to become creators as well. Without any special skills, people can now post their opinions on blogs, add information to wikis, and put their photos on Flickr. If you're an educator who's been wondering what the newer web tools could add to your classroom, sample some of the books listed below. They may inspire you to try something new.

Blogs, Wikis, Podcasts, and Other Powerful Web Tools for Classrooms

By Will Richardson

Richardson is excited about what he calls "the read/write web" and his enthusiasm is contagious. In this book he speaks directly to teachers as he introduces each tool and shows how innovative educators have used them to engage and motivate students.

Publishing a Blog with Blogger

By Elizabeth Castro

With big color photos and clear step-by-step directions, this slim little volume really can get you blogging fast. Castro begins with setting up an account at Google's free blogger.com, guides you through your first post, and then goes on to more advanced topics like adding photos and audio files.

Podcast Solutions

By Michael W. Geoghegan and Dan Klass

If you're thinking of podcasting, start here and let two pioneers tell you how to do it right. Geoghegan and Klass write with insight and cover all the bases, from setting up your studio and designing a quality show, to finding your audience.

Flickr Hacks

By Paul Bausch and Jim Bumgardner

The popular photo-sharing website lets users post, organize, and tag their photos—but that's just the beginning. The authors give you the basics and then present some advanced hacks, such as sending photos from your camera phone, creating collages, and other custom applications.

These books are available in the Documents Room Library. Call **346-4406** for more information, or visit our website at <http://docsrm.uoregon.edu/>

Don't Be Taken In By (Absurdly) High-Yield Investment Scams

Joe St Sauver, Ph.D.

Director, User Services and Network Applications
joe@uoregon.edu

We've recently begun to see a growing number of so-called "High-Yield Investment Program" (HYIP) scam spam, also known as "prime bank scams," targeting campus users.

While most of this spam will be successfully blocked if you've set up your account to use SpamAssassin (see "SpamAssassin Available for All uoregon.edu Accounts" at <http://cc.uoregon.edu/cnews/spring2006/spamassassin.htm>), unfortunately some may still slip through and tempt you to participate.

Most often, HYIP scams promise absurdly high rates of return, perhaps a percent or more *per day*, while simultaneously claiming that your "investment" in that HYIP is both legitimate and risk-free. Your "participation"

can often start with miniscule amounts (sometimes as little as \$10 or \$20).

If you send money into a HYIP site, you can *count* on being ripped off. No one will legitimately pay a percent or more a day for funds for risk-free purposes when they can get money from a bank (or even a cash advance from a credit card!) for a fraction of that rate.

HYIP always require you to leave your money in the program for some period of time, usually one to three months. When it is finally time for the HYIP to return your principal and its lavish interest earnings, the HYIP will have vanished, taking your money with it. Remember, if a deal *sounds* too good to be true, it *is* too good to be true. Do not invest money in so-called HYIP schemes.

For additional information, see "Warning to All Investors About Bogus 'Prime Bank' and Other Banking-Related Investment Schemes" at <http://www.sec.gov/divisions/enforce/primebank.shtml>

PDP7 Finds a Home!

Microsoft's Paul Allen allows the venerable UO computer to retire in glory

In mid-June, one of the UO's historic workhorse computers, a DEC PDP7 employed for more than 30 years in analyzing neutron physics data and in Federal Aviation Administration safety studies¹, was relocated to the state of Washington.

The PDP7 was rescued from oblivion by PDPplanet.com, a resource for computer history organized by Microsoft cofounder Paul Allen. PDPplanet is dedicated to enshrining Allen's growing collection of Digital Equipment Corporation mainframes and minicomputers.

Photos and histories of these computers, many of which are being restored to full working order, are available on PDPplanet's website at <http://www.pdpplanet.com/>

¹See "Goodbye to the PDP7" in the Fall 2001 issue of *Computing News* (<http://cc.uoregon.edu/cnews/fall2001/pdp7.html>)



In an archive photo, physics professor Harlan Lefevre puts the still-functioning PDP7 through its paces in the Volcanology basement. Both Prof. Lefevre and the PDP7 are now retired.

‘Operation Global Con’ Rounds Up Hundreds of Mass-Marketing Fraudsters Worldwide

In a feat of international law enforcement cooperation, more than 565 people were recently arrested in connection with a wide variety of criminal mass-marketing schemes. These schemes included bogus offers of “pre-approved” credit cards, phony sweepstakes awards and investment offers, tax fraud, and “419” advance-fee plays. For details, see http://www.usdoj.gov/opa/pr/2006/May/06_crm_321.html

Millions of VA Records Stolen

In one of the more high-profile recent security breaches, the personal records of more than 26 million U.S. veterans were reported stolen in May. The data, which was on a computer disk stolen from a VA employee’s home in suburban Maryland, included Social Security numbers for all living veterans who served and have been discharged since 1976, and names of addresses of more than two million active-duty military personnel. It is feared these records will be used in identity theft scams. Those affected will be notified individually. For details, see

<http://www.firstgov.gov/veteransinfo.shtml>

Another ID Theft Threat: TG Student Loan Corporation Loses Data for 1.3 Million Borrowers

On May 24, a subcontractor for Texas Guaranteed Student Loan Corporation lost equipment containing the names and Social Security numbers of more than a million borrowers. TG is mailing letters to those who are directly affected and providing advice on how to guard against identity theft. For more information on the privacy breach, including answers to frequently asked questions and concerns, see TG’s website at

<http://www.tgslc.org/resources/customerdata.cfm>

DOD and Hospital Computers Disrupted by Malware Attack

A 20-year-old hacker recently admitted launching malware attacks that shut down computers in a Seattle hospital and damaged military computer systems in Manheim, Germany, and in Fort Carson, Colorado. The malware infections were spread by botnets—“zombie networks” of hijacked computers that recruit vulnerable PCs to do their dirty work. This latest security breach underscores the need to defend PCs with up-to-date virus software, firewalls, and the latest security patches. For details, see

<http://www.sophos.com/pressoffice/news/articles/2006/05/nwhospital2.html>

Microsoft Wins Its First Civil Phishing Case

In May, a phisher who targeted MSN customers was sentenced to 21 months for fraud and wire fraud. Microsoft’s Internet safety enforcement attorney hailed the conviction as a “new milestone in Microsoft’s global phishing enforcement initiative.” The convicted phisher sent emails MSN customers in an attempt to trick them into divulging credit card numbers and other sensitive personal information. His scheme affected between 50 and 250 victims. For more details, see

http://www.darkreading.com/document.asp?doc_id=95415

Smartbot.Net and Odysseus Marketing Barred from Spyware Operations

Two companies and their principal officers have been heavily fined and ordered to cease downloading spyware onto unsuspecting consumers’ computers after a successful suit by the Federal Trade Commission (FTC). For details, see

<http://www.ftc.gov/opa/2006/05/seismic.htm>

Russian Science Student Convicted of Creating and Spreading Malware Via Virus Exchange Websites

This spring, a Russian science university student who used his technical expertise for malicious purposes was convicted of running two virus exchange websites that spread more than 4000 different computer viruses—some of which he had created himself. For the full story, see

<http://www.sophos.com/pressoffice/news/articles/2006/05/russianvx.html>

New Internet Phone Hacking Scams Emerging

A new form of hacking made the news when police arrested of a 23-year-old Miami man charged with defrauding legitimate Internet phone companies of more than a million dollars. Edwin Andres Pena is accused of surreptitiously hacking into Internet phone providers’ networks and, posing as a company offering wholesale phone connections at discounted rates, routing his clients’ calls through those providers’ systems at no cost to himself. For more details, see

<http://www.nytimes.com/2006/06/08/technology/08voice.html>

Secret Service Targets Traffic in Stolen Consumer Information

In a crackdown on illegal trafficking in credit card data and other stolen consumer information, the Secret Service has apprehended 21 suspects from around the country since January. One of the suspects is a Virginia Tech student. For the full story, see

http://www.spamdailynews.com/publish/Secret_Service_arrests_7_under_operation_Rolling_Stone.asp

Seven Problematic Areas of Statistical Analysis



Robin High

Statistical Programmer and Consultant
robinh@uoregon.edu

Advances in computing technology and sophisticated programs offer many more choices for data analysis than even a few years ago, and researchers should make informed decisions about which technique to apply. The industrial statistician George Box, best known for his books on time series and experimental design, once wrote, "All models are wrong, but some models are useful." I would add that some models are more useful than others—or even more to the point, some models are more appropriate than others.

One of the potential weaknesses of any statistical analysis is accepting the output at face value. Just because SPSS or SAS (or any other program) produced it doesn't mean it's necessarily correct or the best technique you could have used. The purpose of this article is to briefly describe seven particular problematic areas of statistical analysis and introduce you to important new developments that will help you deal with them.

1. Lack of study planning

This first problematic area directly relates to my article on power calculations (<http://cc.uoregon.edu/cnews/spring2006/powercalc.htm>). Data analysis begins with study planning and focuses on the inputs to the problem and resources required to answer your research questions. This important first step is often difficult, but it's essential for data analysis later on. (Remember Abe Lincoln's maxim, "If I had eight hours to chop down a tree, I'd spend six hours sharpening my ax.") The type of data (discrete or continuous) and how data will be collected (i.e., the design) all help determine appropriate analysis tools to answer research questions.

2. Placing importance on study results only when p-values are less than .05

There is nothing scientific about a cutoff for statistical significance of $\alpha=.05$, even though this particular value is the default value in most programs and does have intuitive appeal. If you followed the study planning steps mentioned in #1 above, you have a solid basis for selecting $\alpha=.05$ as a reasonable cutoff p-value for significance. This implies you have given thought to variability, effect size, and Type I and Type II errors, and considered what they actually mean in your study when viewed together.

In data analysis, the meaning of a p-value is *the strength of evidence the sample data provides against the null hypothesis*—that is, evidence against a hypothesis of no effect, H_0 . When interpreting a p-value, you assume your data show nothing interesting. You then apply the

statistical test saying, OK, prove me wrong and show me the evidence! Out comes a number that indicates if your chosen model explains the data better than results due to random variation. You then assess if the magnitude of the observed effect is of practical value along with its associated strength of evidence (i.e., you need to observe an arbitrarily small p-value to reject the null hypothesis).

To choose an arbitrary cutoff value, evaluate exploratory studies against larger p-values (say, approximately 0.10) to indicate results look interesting and are worthy of further research. Use a much smaller cutoff value (say, less than 0.005) if the study has public safety or financial implications.

3. Chi-square tests with small samples

The Pearson chi-square test and the likelihood-ratio test are among the methods most widely applied to interpret the independence of cell counts in multi-dimensional contingency tables. Although the formulas look very different, they can be shown to be asymptotically equivalent. That is, they should be approximately the same number as the sample size gets *large*; both are compared to a chi-square distribution with appropriate degrees of freedom. However, the key phrase here is *large sample size*. Under the null hypothesis of factor independence, tables may have one or more small expected cell counts. A statistical program will warn you if the cell counts are not large enough for the mathematical properties of these tests to hold. Collapsing multiple categories into fewer levels is one way to work around the problem. Yet another way, and perhaps the only one, is to apply *exact* tests of independence.

When you have only small amounts of data, exact tests are available for many analyses that typically require large sample sizes (PROC, FREQ, NPAR1WAY, and LOGISTIC in SAS, separately acquired exact test modules in SPSS). These tests often have intensive computing and memory requirements and may not run in a reasonable time—or not run at all. In that case, you can try tests based on simulations. Exact tests offer a better alternative to the computation of that all-important p-value when you are faced with *small* sample sizes, either by design or practical limitations.

4. Indiscriminant application of regression and analysis of variance

Assume you have collected one, and only one, observation for each subject randomly selected from a well defined population (i.e., all observations are independent). Regression or ANOVA techniques to test for linear relationships of a continuous response variable with one or more predictors (which may be categorical or continuous) are then appropriate.

If the data exhibit clustering, (i.e., where the observations are not collected independently) then see

#7 below. One common problematic task with data clustering includes measuring a subject multiple times and then analyzing the averages as if they were a single number. Although this has been a common approach in the past, with today's advances in multi-level modeling, it is usually not necessary or even desirable.

Many data problems lurk in the background when running linear regression or ANOVA models. Diagnostic techniques should be applied to test for influential data, outliers, homogeneity of variance, and collinearity. You should also always consider tests for normality and outliers in the residuals so that you don't claim or miss significance on the basis of a small number of discrepant observations. PROC ROBUSTREG is a new SAS procedure that can help with this situation.

It's generally accepted that you should never apply stepwise regression selection of variables for a model. Three reasons for not doing it are found in Thompson (1995). One of the main problems is that the independent variables are usually not all that independent (i.e., they exhibit a degree of collinearity) and this redundancy has the potential to cause mild to severe problems in model selection, and these sample-specific models frequently fail when applied to new datasets. This same rationale can also be applied to the ranking of the importance of variables that are in a model, another problematic area.

5. Analysis of data from non-normal distributions as if they were normal

This problem follows from #4. *Not choosing the appropriate model for the data is the real concern.* Discrete response variables, whether they are dichotomous, ordinal, counts, proportions, or other data with non-normal distributions, are more appropriately analyzed with generalized linear models. For example, the odds ratio is a convenient way to examine dichotomous (or binary), ordinal (e.g., Likert scale), and multinomial data. Data with one observation for each subject can be examined with PROC LOGISTIC. Many types of generalized linear models can be analyzed with PROC GENMOD, including discrete data collected as repeated measures.

Working with ratios presents another type of data analysis problem. You should always store both the numerator and denominator that compute ratios and analyze *them*—rather than treating the ratios as if they were normally distributed, even after applying a transformation. (*Note: the theory behind the arcsin transformation, often applied to percents, is based on a ratio of known integers that count independent events.*)

6. Distorted graphic displays of data

Graphic displays are powerful tools for summarizing research findings and should be an integral part of any publication or public presentation of results. It's important to use visual methods in addition to tables or prose descriptions to show what results actually

mean. Unfortunately, you may find it difficult to get the desired graph with existing programs, as they include many feature choices that may distract from what you want to show.

Anyone who summarizes data in charts and graphs should read Edward Tufte's classic book *The Visual Display of Quantitative Information* as well as his other publications. These present a wealth of information on how to visually present data effectively. William Cleveland's books on this subject are also a particularly good resource for statistical graphs.

7. Not understanding the concept of a within-cluster covariance matrix

Whenever you have two or more values collected within subjects (clusters), you have a data analysis situation that requires an assumption about the structure of a within-subject covariance matrix. You could choose to ignore it, but failing to understand how a covariance matrix works may influence the results you observe.

It's possible to assume an unstructured covariance matrix and apply a multivariate model. However, researchers often respond to correlated data with a repeated measures approach by implementing the general linear model (GLM) module from either SAS or SPSS and then checking the sphericity condition; if necessary, the error degrees of freedom are adjusted downward to make statistical tests on the within-subjects factors. This was the state-of-the-art approach up until only a few years ago, but today we can do much better by analyzing clustered or repeated measures data with a mixed model.

Learning how to work with the covariance matrix beyond the sphericity assumption or an unstructured matrix opens many possibilities for more appropriate data analyses. In many situations, the General Linear Model (GLM) of both SAS and SPSS simply don't work well with clustered data. PROCs MIXED, NLMIXED, GLIMMIX are designed for continuous data; and PROCs GENMOD, NLMIXED, and GLIMMIX all work with discrete data (see Little, 2006).

References

1. Box, G.E.P., "Robustness in the Strategy of Scientific Model Building," in Lanner and Wilkerson, eds., *Robustness in Statistics* (NY, Academic Press, 1979), pp. 201-236.
2. Littell, Ramon C., George A. Milliken, Walter W. Stroup, Russell D. Wolfinger, and Oliver Schabenberger. 2006, *SAS for Mixed Models*, Second Edition. Cary, NC: SAS Institute Inc.
3. Thompson, B. (1995). "Stepwise regression and stepwise discriminant analysis need not apply here..." *Educational and Psychological Measurement*, 55, 525-534.
4. Tufte, Edward R., (Second edition, May 2001) *The Visual Display of Quantitative Information*, Graphics Press: Cheshire, Connecticut.

Showing Rather Than Telling: Capturing On-Screen Demos With Camtasia

Joe St Sauver, Ph.D.

Director, User Services and Network Applications
joe@uoregon.edu

When it comes to teaching someone how to perform a new task on a personal computer, it would be ideal to sit down with that person and explain the new procedure in a systematic step-by-step fashion.

Unfortunately, all too often that's impossible, and support staff frequently end up trying to talk users through complex processes on the phone or via email. Such experiences can often be frustrating for the user, and they're also potentially fraught with errors.

Printed documents that include screen shots can help eliminate some of these problems, but given the prevalence of dynamic graphical user interfaces, what would really work best in many cases is a short on-screen demonstration, or "screencast."

TechSmith's Camtasia Studio (<http://www.techsmith.com/camtasia.asp>) is an example of a relatively inexpensive (educational price: \$149) commercial application that makes it easy to create screencasts under MS Windows. Camtasia can record what's displayed on your PC while integrating voice narration, or even video from a web camera. Once you've recorded your project, you can then edit it by adjusting the audio or video, adding titles or other text, and so on. When your project is complete, you can output digital movies in a variety of different formats.

New users are guided through the process of creating a screencast by a very easy-to-use wizard, while those who are more experienced have full control via a point-and-click graphical interface and/or keyboard shortcuts.

To briefly show what Camtasia can do, I've created a small sample screencast in Windows Media format which you can view at <http://www.uoregon.edu/~joe/sample-screencast/spam.wmv>

Things to Note:

- Take a lesson from the TV news people: simple, short, and sweet topics make the best screencasts.
- Carefully script your screencast before you begin recording anything.
- When you first begin to create your screencast, don't expect perfection on the first "take." You'll likely end up recording all or part of your screencast multiple times before being more-or-less satisfied with the result.
- Don't let a self-imposed desire for perfection keep you from experimenting with screencasting. Your screencasts are virtually certain to at least be better than my little example mentioned above. :-)
- While my example was in Windows Media format, you could also save your screencast in QuickTime, Flash, or other formats, depending on your audience and how you plan to deliver your screencast (via the web, on CD, etc.).
- Screencasting applications are primarily designed for the creation of on-screen demos, but since they can capture anything displayed on the screen, they can also be used as a sort of "digital video recorder" to capture online presentations, video conferences, or other online events (be sure to get the permission of the copyright holder or conference participants before making any online video recording with a screencasting application).
- A final thought: while screencasting applications include limited editing capabilities, they do not have all the features and capabilities of a dedicated video editing product, and should not be considered a replacement for one.

Questions or Comments about Screencasting?

UO users should feel to call me at **346-1720**, or drop me a note at joe@uoregon.edu

SAS 9.1.3 Service Pack 4 Now Available

Service Pack 4 is a cumulative update of all fixes and enhancements from Service Packs 1, 2 and 3, as well as additional fixes and enhancements. You must install Service Pack 4 before installing any subsequent SAS 9.1.3 hot fixes.

To download Service Pack 4 and find more information about updating your system, go to http://ftp.sas.com/techsup/download/hotfix/e9_win_dbcs.html

Two options are available. Option 1 should be selected only if you rely on Mid-Tier or JAVA components. Otherwise, the option 2 download should be sufficient.

Are You a UO Cell Phone Service Subscriber? Are You a Light User?

If so, here are some important changes you should be aware of...

Lori Hansell

Customer Service Administrative Assistant

Telecom Services

lhansell@uoregon.edu

If you're subscribing to the discount wireless service for state business use that's offered to UO faculty and staff through Telecom Services, you'll probably need to reconsider your choices in the light of several changes that were recently announced by the major vendors. These changes primarily affect light users who were subscribing to Cingular's flat-rate or TDMA/Digital plans, but other users may also benefit by upgrading their existing plans.

OSA (Oregon State Advantage), aka Cingular TDMA/Digital Plan: These users will see their airtime rate increase from \$.17 per minute to \$.19 per minute—and sometimes to as much as \$1.00+ per minute.

This plan has very limited coverage in Oregon, and in addition to the regular airtime charge noted above, it charges \$.25/minute for long distance and \$.99/minute for roaming. This plan has been grandfathered for the last three years and is referred to as TDMA, aka Digital, with Cingular (formerly AT&T).

TDMA/Digital phones are no longer being offered and have been removed as an option for new activations because the TDMA network is being replaced with the GSM network. Cingular plans to completely shut down TDMA soon, perhaps as early as August of next year.

Cingular's Local and National Flat Rate Plans. The old flat-rate plans—for \$9.99 and \$12.99, respectively (\$8.60/11.17 after discount)—will not be offered once our Western States Contracting Alliance contract is renewed effective June 1, 2006.

After May 31, 2006, the only option available to light users will be with Verizon for the National \$11.99/month, \$.25/minute plan. If you have already upgraded and are on the new Cingular Flat Rate Plans, you will be grandfathered as you have been with the OSA. Any TDMA users that remain until the end will not have service after August 2007—or possibly even sooner.

The lowest-rate plan Cingular will offer is a national 450-with-rollover-minutes plan for \$34.39/month, after discount. Minutes will accrue for a year and then restart after that point.

Another option: keep your number and change your provider to Verizon. Verizon offers many free phones,

great coverage, and competitive rates. It also offers a low-use plan for \$11.99/month and \$.25/minute (one charge per minute). This is a national plan, and there is no additional discount. The next step up is Verizon's National Plan (450 minutes for \$33.19, after discount).

To see what's available, please visit the Verizon and Cingular websites (<http://www.verizonwireless.com/>, <http://www.cingularwireless.com/>). Most options are available to our users, although prices of phones and plans will vary.

You'll find Telecom order forms on the forms page (<http://telcom.uoregon.edu/Forms-Form12.htm>) and on the Cellular Phone Information page at <http://telcom.uoregon.edu/Cellular.htm> under "Cellular Phone Order Form 12."

If you have further questions regarding cell phones, wireless plans offered through UO Telecom, or UO policy, please contact Lori Hansell (346-1035, or lhansell@uoregon.edu).

● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● *Be Aware of Latest FCC Ruling on Junk Fax*

**If you publish your fax number
on your web page, it's advisable
to add a clear statement refusing
unsolicited ads at that number**

An amendment to the FCC rules implementing the Junk Fax Prevention Act of 2005 indicates that "a facsimile number obtained from the recipient's own directory, advertisement, or internet site was voluntarily made available for public distribution, unless the recipient has noted on such materials that it does not accept unsolicited advertisements at the facsimile number in question."

(<http://www.fcc.gov/cgb/policy/telemarketing.html> 04/05/06, Acrobat document, page 9)

In other words, unless you specifically state on your web page or other publications that you do not wish to receive unsolicited materials at the fax number you advertise, you may have no recourse for complaint.

● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●

Departmental Computing Support Staff Meetings Encourage Information Exchange

Regularly scheduled events keep staff up-to-date on campus technical needs and developments

The Departmental Computing (DeptComp) group meets several times a year to discuss how best to support the UO's technical needs, and also to share information about developments in various sectors. These meetings are frequently hosted by different departments on campus, giving support staff the opportunity to learn firsthand about the role of developing technologies in UO departments campuswide.

Membership is open to the campus community, and notices of meetings as well as open discussions of technical issues are regularly posted to the deptcomp mailing list.

If you provide IT support on campus and would like to subscribe to the deptcomp listserv, email majordomo@lists.uoregon.edu with the following two lines comprising the body of your message:

```
subscribe deptcomp  
end
```



Attendees of the May 26 DeptComp meeting in Lillis Hall listen intently to a presentation by James Bean, Dean of the Lundquist College of Business, regarding the role of IT in his department. In March, the group meeting was hosted by the School of Architecture and Allied Arts, where Dean Frances Bronet outlined her vision for utilizing technology in the arts.

You'll find more instructions for participating in campus listservs at <http://cc.uoregon.edu/maillinglists/members.html> ("Majordomo Basics for List Members").

Want to Join an IT Task Force?

DeptComp is taking a survey of interest in joining one or more campuswide task force groups to tackle some of the technical issues we all face. Some of these issues include researching and recommending help desk software for the local and university level, considering the possibilities for expanding site license purchases, coordinating technical training and professional development opportunities, and developing standard policies and procedures for IT resources to be recommended to decision-makers.

The full list is available online, and you are welcome to add task force suggestions of your own. To view the list, go to

http://cc.uoregon.edu/deptcomp_bulletins/taskforce_survey.pdf

If you're interested in joining any of these groups, please contact Beth Sprague (346-1799, bsprague@uoregon.edu)

Dealing with Departmental Email Contact Addresses and Staff Changes

Using a small majordomo mailing list is a good option for keeping your department's contact address current, regardless of staff changes

Joe St Sauver, Ph.D.

Director, User Services and Network Applications

joe@uoregon.edu

Many departments conduct substantial day-to-day business via email and have email contact addresses listed on their web pages or in fliers, handouts, and other promotional materials.

If those contact addresses are individual email accounts, problems can arise when employees' duties change, or when employees change jobs, fall ill and are away for a protracted period of time, or are otherwise unable to handle the mail that's coming into their account.

What Kinds of Problems Can Arise?

To understand why such situations can be a problem, let's consider four scenarios and how the university's Acceptable Use Policy and its Addendum might apply (to review the Acceptable Use Policy and the Addendum, see http://cc.uoregon.edu/policy/acceptable_use.html and http://cc.uoregon.edu/policy/aup_addend.html):

- Users may not share the password to their account (AUP: "Sharing of Accounts or Lab Passes Prohibited"). Thus, it would be inappropriate for you to tell someone else your password so that they could log in to your account while you're traveling or are otherwise unavailable.
- When UO employees are no longer employed by the university, their email accounts are terminated (with the exception of retirees, employees who are also students, and so on. See <http://hr.uoregon.edu/benefits/aretsrvcs.html> and <http://hr.uoregon.edu/benefits/cresrvcs.html>). If those defunct email addresses have been widely publicized in a flyer or other material, anyone trying to contact a program via those addresses may be frustrated when their email is returned as undeliverable.
- When university employees change jobs or change to student-only status, if their personal account has been used as a departmental contact address they will likely continue to receive email for their old job, even though they are no longer employed in that role. This can be a tremendous nuisance for both the department and the former employee.
- Under the Acceptable Use Policy, while employees are allowed to "use academic computing resources

to learn, explore and grow as part of [his/her] education or employment at the University" (AUP Addendum: "Appropriate Use of Electronic Information Systems"), that same document makes it clear that "the University does clearly own, control, or have a custodial relationship with respect to certain classes of information stored on its electronic information systems, including, but not limited to [...] electronic messages pertaining to University planning, budgeting, operations, governance and deliberative activities." (AUP Addendum: "Ownership of Systems and Information").

Because of this, if critical departmental communications are being sent to your personal account and you are unavailable for an extended period of time, it may be necessary for University Legal Counsel to authorize limited nonconsensual access to those communications for essential university business purposes. Such requests are awkward for all involved, and we'd like to minimize them or avoid them altogether.

How Should Departmental Email Contact Addresses Be Handled?

For departmental point-of-contact email addresses, our recommendation is that departments consider setting up a small majordomo mailing list, using that mailing list as the departmental point of contact instead of using a personal account.

One key point: unlike most mailing lists, which allow virtually anyone to join, a departmental point-of-contact mailing list should be configured so that any attempt to subscribe is referred to the list owner, thereby ensuring that only authorized users can see mail sent to that list. (Information on creating and managing a majordomo mailing list can be found at <http://lists.uoregon.edu/manage.html>)

To understand how using a mailing list can help ensure continuity of departmental email access and eliminate problems, consider the following:

- More than one person can receive mail sent to the departmental address (for example, the normal departmental office coordinator plus that person's backup).
- If someone who is currently on the list changes jobs, gets sick, or goes on leave, that person can simply be removed from the list. When someone new joins the department, or the original employee returns, they can easily be (re)-added.

- continued on page 22

Email Addresses, continued...

- Using a mailing list can also be helpful when it comes to organizing or filtering mail you receive, so that high priority mail can be handled first, then other mail dealt with as time permits.
- Using a mailing list makes it easy for a supervisor to monitor responses to ensure that questions are being handled, and handled appropriately.

There are some minor disadvantages to using a small majordomo mailing list as a departmental point of contact address:

- The address itself will be somewhat long (i.e., its suffix will be *@lists.uoregon.edu*, rather than simply *@uoregon.edu*). There's no inherent problem with this, it's just that some people may not like the additional text.
- The people on the list need to remember to reply to the list as well as the person asking a question or asking for information; failure to do this may result in multiple responses to a single question.
- A UO user (such as the department head) needs to officially own and administer the list.

Those limitations notwithstanding, use of a small private mailing list for departmental points of contact can really eliminate a lot of issues when it comes to handling routine day-to-day department business via email.

If you handle mail for a UO department and have questions about this topic, feel free to get in touch with me, Joe St Sauver (*joe@uoregon.edu*). Alternatively, for general majordomo mailing list questions, please email *listmaster@lists.uoregon.edu*

CALEA Update

A number of national networking policies have been much in the news lately, including CALEA (the Communication Assistance for Law Enforcement Act).

For those of you who may not have been following CALEA closely, CALEA is a requirement that facilities-based networks include the ability to support lawful intercept requests from law enforcement (e.g., court ordered wiretaps). While CALEA compliance had historically been required only of traditional telecommunication carriers, on May 3, 2006, the FCC released a second report and order that extended CALEA's provisions to broadband Internet providers and to universities, in part because of the increasing popularity of voice over IP (VoIP) technologies such as Vonage and Skype, with a compliance deadline of May 14, 2007.

The American Council on Education (ACE) and a variety of other higher education groups appealed the FCC's order to the US Court of Appeals for the District of Columbia. On the 9th of June, 2006, that appeal was denied in a complex ruling that is still being reviewed by attorney's at ACE, EDUCAUSE, and elsewhere in an effort to understand what that decision means for higher education, and whether further appeals are warranted.

Some CALEA Resources

- The FBI's CALEA site: <http://www.askcalea.net/>
- The FCC's CALEA site: <http://www.fcc.gov/calea/>
- EDUCAUSE's CALEA web site: http://www.educause.edu/Browse/645?PARENT_ID=698
- EFF's CALEA web site: <http://www.eff.org/Privacy/Surveillance/CALEA/>
- The FCC's Second Report and Order and Memorandum Opinion and Order dated 5/3/2006: http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-06-56A1.pdf
- The US Court of Appeals ruling on ACE's appeal: <http://pacer.cadc.uscourts.gov/docs/common/opinions/200606/05-1404a.pdf>
- "Wiretap Report 2005," Administrative Office of the United States Courts: <http://www.uscourts.gov/wiretap05/contents.html>
- "The Implementation of the Communications Assistance for Law Enforcement Act," US Department of Justice, Office of the Inspector General, Audit Division, Audit Report 06-13, March 2006 (with redactions): <http://www.usdoj.gov/oig/reports/FBI/a0613/final.pdf>

« sites worth seeing »

1. **“Sendmail Concepts...”** Technical mail administrators can learn some of the more frequently used Sendmail configurations in John Kemp’s online article. Covers the basic difference between email submission programs and email transmission agents and discusses client-class mail configurations, mail routing options, and access controls. Also includes references for further study:
<http://security.uoregon.edu/sendmail/>
2. **Help for UO Mathematica users...** UO Mathematica users looking for pointers on using this technical computing software may want to subscribe to MathGroup, a moderated email list and Internet newsgroup. This forum was founded by moderator Steve Christensen, codeveloper of MathTensor software and professional Mathematica consultant:
<http://forums.wolfram.com/mathgroup/>
3. **Encryption software resources:**
 - **TrueCrypt: Free open source disk encryption software for Windows XP/2000/2003 and Linux...** If you’re a sophisticated user investigating encryption tools for your PC, you may want to check out TrueCrypt, a free open source disk encryption program for Windows:
<http://www.truecrypt.org/>
(Also see John Kemp’s article, “Taking Charge of Your Own Data Security: a Review of Encryption Tools for the Windows PC” on page 6 of this issue.)
 - **Security Now!** TechTV’s weekly discussion of personal computer security issues. Subscribe to the podcast or download selected episodes from the archives:
<http://www.grc.com/SecurityNow.htm#41>
4. **“The Wealth of Networks: A New Formula for Understanding the New Global Information Economy”...** The Packet Clearing House’s road map for establishing the future of the Internet. Packet Clearing House (PCH) is a nonprofit research institute dedicated to “improving the quality, robustness, and accessibility of the Internet” through empirical analysis.
<http://www.pch.net/resources/papers/the-wealth-of-networks/>
5. **Campus wikis...**
 - **“Fiddling with Tiddly-Wikis”...** UO College of Education Network and Information Systems Manager Mary Harrsch gives her take on the educational potential of TiddlyWiki technology, including a link to her own “first TiddlyWiki”:
<http://www.uoregon.edu/~mharrsch/2006/01/fiddling-with-tiddly-wikis.html>
 - **University of Oregon History Wiki...** School of Journalism systems administrator Ryan Stasel set up this wiki to gather data on UO history before it’s lost to posterity. Ryan’s goal “is to provide a place where people can post ‘useless’ knowledge about the UO that may not be somewhere else.”
<http://jcomm.uoregon.edu/uohistory/>
6. **“The ResNet 2005 Survey”...** Last year the ResNet Applied Research Group surveyed those who support higher ed residential networks and related services to get a sense of the scope of their operations, security policies, and challenges. Results of this survey are now published online in PDF format. This site also includes links to related research, and contact information for those who wish to volunteer their expertise for future studies:
<http://www.resnetsymposium.org/workinggroups/research.htm>
7. **“Assessing Skype’s network impact...”** This article by By Edwin Mier, David Mier and Anthony Mosco (*Network World*, 12/12/05) publishes the authors’ conclusions after conducting a series of tests on multiple versions of Skype, a free peer-to-peer phone program for making calls within the U.S. and Canada via the Internet. Initially, Skype caused worries of security breaches because of its permeation of many enterprise networks and its custom of commandeering users’ PCs in order to operate. However, the authors concluded that such worries are baseless (“Our testing shows that neither Skype VoIP nor Skype Instant Messaging poses any readily exploitable security threat.”):
<http://www.networkworld.com/reviews/2005/121205-skype-test.html>

*free tech training:
workshops
on demand*

The UO Libraries offers *Workshops on Demand*, a new model of technology training to faculty, staff, and students that emphasizes increased collaboration with faculty in integrating information technology skills into the curriculum. See <http://libweb.uoregon.edu/it/> for full details, including a list of alternative training resources on campus.

COMPUTING CENTER GUIDE

UO Website

<http://www.uoregon.edu/>

Computing Center Website

<http://cc.uoregon.edu/>

Microcomputer Services

(151 McKenzie Hall)

<http://micro.uoregon.edu/>

346-4412

microhelp@lists.uoregon.edu

- microcomputer technical support
- help with computing accounts, passwords
- help with damaged disks, files
- system software help
- Internet connections, file transfers
- public domain software, virus protection
- software repair

Documents Room Library

<http://docsrm.uoregon.edu/>

(175 McKenzie Hall)

346-4406

Modem Number

Dialin modem number for UOnet, the campus network: **225-2200**

Large Systems Consulting

<http://cc.uoregon.edu/unixvmsconsulting.html>

(225-239 Computing Center)

346-1758

consult@uoregon.edu

- Unix
- email, multimedia delivery
- scientific and cgi programming
- web page development

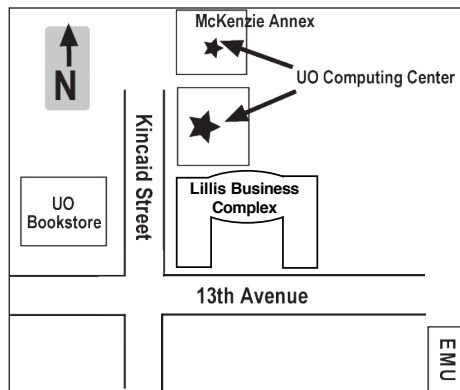
Statistics Consulting

Robin High

219 Computing Center

346-1718

robinh@uoregon.edu



Electronics Shop (151 McKenzie Hall)

http://cc.uoregon.edu/e_shop.html

346-3548

hardwarehelp@uoregon.edu

Computer hardware repair, upgrades

Network Services

<http://ns.uoregon.edu/>

346-4395

nethelp@ns.uoregon.edu

Central data communication and network services

Telecommunications Services

<http://telcom.uoregon.edu/>

346-3198

Local and long distance phone service for UO campus.

Administrative Services

<http://ccadmin.uoregon.edu/>

346-1725

Programming support for campus administrative computing.

Computing Center Hours

Mon - Fri 7:30 A.M. - 5:00 P.M.

McKenzie Building Hours

Mon - Thu 7:30 A.M. - 11:30 P.M.

Friday 7:30 A.M. - 7:30 P.M.

Saturday 9 A.M. - 9:30 P.M.

Sunday 9 A.M. - 9:30 P.M.

• Note: These are *building* access hours; hours for individual facilities may vary.



UNIVERSITY OF OREGON

UO COMPUTING CENTER

1212 University of Oregon Eugene, OR 97403-1212